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### **Wendlebury (Alchester), an annexe of AD 44 and the earlier (?) main fortress (SP 570 203)**

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**UNIVERSITY OF OXFORD, INSTITUTE OF  
ARCHAEOLOGY AND UNIVERSITY OF  
LEICESTER, SCHOOL OF ARCHAEOLOGY  
AND ANCIENT HISTORY**

**Wendlebury (Alchester), an annexe of AD 44 and the  
earlier(?) main fortress (SP 570 203)**  
Eberhard Sauer

**Main Results**

**Evidence for an early fortress underneath the town  
contemporary with or earlier than the AD 44 annexe**

While the 2000 season yielded evidence for the earliest precisely datable Roman timber structure from Britain, a wooden gate built in autumn AD 44, in the light of the 2001 season it appears that this was not part of the earliest military installation on site. There is now evidence for a second military compound, a Roman fortress, underneath the town of Alchester. Not only sections of its outer defences have been traced by excavation (in trench 28) and geophysical survey, but parts of a timber granary (in E. trench 4) were unearthed. A series of indications suggests that the compound whose west gate yielded two identical tree-ring dates of October AD 44 to March AD 45, in the west is its annexe. The combined size of fortress and annexe is estimated to exceed 14ha. The fortress underneath the town is thus probably not later (a hypothesis favoured previously) than the compound of AD 44 in the west, but contemporary or earlier (i.e. it is likely to date to AD 43 or, possibly, AD 44). The western gate (whose location is now precisely known) has a similar potential of yielding a precise dendro-date in a future season as the annexe gate of AD 44.

**Architecture and building history of the probable  
fabrica**

We know now substantially more about internal buildings in the annexe, especially about the plan and building history of the military workshop (*fabrica*). The latter was an extensive complex and comprised various rooms grouped around a courtyard with a timber porticus. Its building history comprised at least four phases, of which three are military (even though it is likely that some, but not all, of the features attributed to phase 3 date to the civilian period). While the second phase starts early (c AD 45?), this observation nevertheless supports the assumption that military occupation continued well into the AD 50s if not beyond. The finds spectrum suggests that military occupation ceased by or before the mid AD 60s at the very latest.) Civilian period use of the building, however, interestingly appears to continue into the late first or early second century. Beam slots of military buildings in trench 28 reinforce the impression of a dense occupation throughout the annexe; it was not a storage area, but will have housed a garrison of presumably c 1,000 men on its own (plus c 2,500 to 3,000 soldiers in the main fortress).

**Evidence for artillery and slingers and the type of  
garrison**

The discovery of a catapult bolt and a clay slingshot in the annexe provides evidence for artillery and slingers, of whose

presence we had previously no knowledge. These new finds and a large number of other pieces of military equipment suggest that the garrison comprised specialists in all categories of warfare, including also archers and both cavalry and infantry. Both slings (Voelling 1990, 44-6) and catapults were in use by legionaries and auxiliaries alike; the frequent discovery of pieces of artillery equipment in smaller forts and in bases in provinces without legionary garrison disproves that they were in exclusive use by legionaries as some believe. The circular argument that all, except some very rare forms of objects traditionally regarded as catapult bolts, were in fact javelin heads because they occur in auxiliary forts (Baatz 1966) equally fails to convince. Whether the troops stationed in the main fortress were as versatile as those in the annexe is as yet unknown, and we do not know whether the separation of the base into main fortress and annexe had purely chronological reasons or whether we might be dealing with troops of different status (legionaries and auxiliaries?). Much better documentation exists for the later fort of Osterburken in Roman Germany which may form a useful analogy. The fort of Osterburken was built in the later AD 150s, and the annexe over 25, and possibly as much as 35 years later. The fort housed a cohort and the annexe a numerus, a unit of lower status (Schallmayer 1986). While we cannot be sure whether the situation was necessarily similar at Alchester, this analogy may offer some support for an earlier date of the main fortress (AD 43?) and, possibly, a higher status garrison. The Alchester garrison was in any case a numerically strong force capable of defending itself and of operating independently if necessary.

**Further waterlogged remains**

The completion of the excavation of a section of the inner annexe ditch in trench 24 yielded further fragile wooden artefacts and waterlogged archaeobotanic evidence. The former included three further thin wooden plaques or tablets which were lifted en bloc. While so far none of the wooden tablets has yielded any traces of writing, the survival conditions would be perfect for writing tablets. The tablets are made of oak and some of them might even be large enough to furnish tree-ring dates. Trenches 28 and 31 equally yielded wooden objects and waterlogged plant remains.

**The Trenches**

**The Annexe Ditches in Trench 24**

Because of the density and fragility of wooden artefacts, we excavated very carefully and slowly and therefore did not finish the excavation of the inner fortress ditch in 2000. We continued with the excavation of this trench in 2001 (and completed it) for the following reasons:

- (1.) In order to be able to produce a complete profile, including the bottom of the inner fortress ditch.
- (2.) In the light of the decreasing water table it seemed useful to recover a representative sample of artefacts from a section of the ditch, including some from the very bottom. The trench had already in the 2000 season yielded a rich

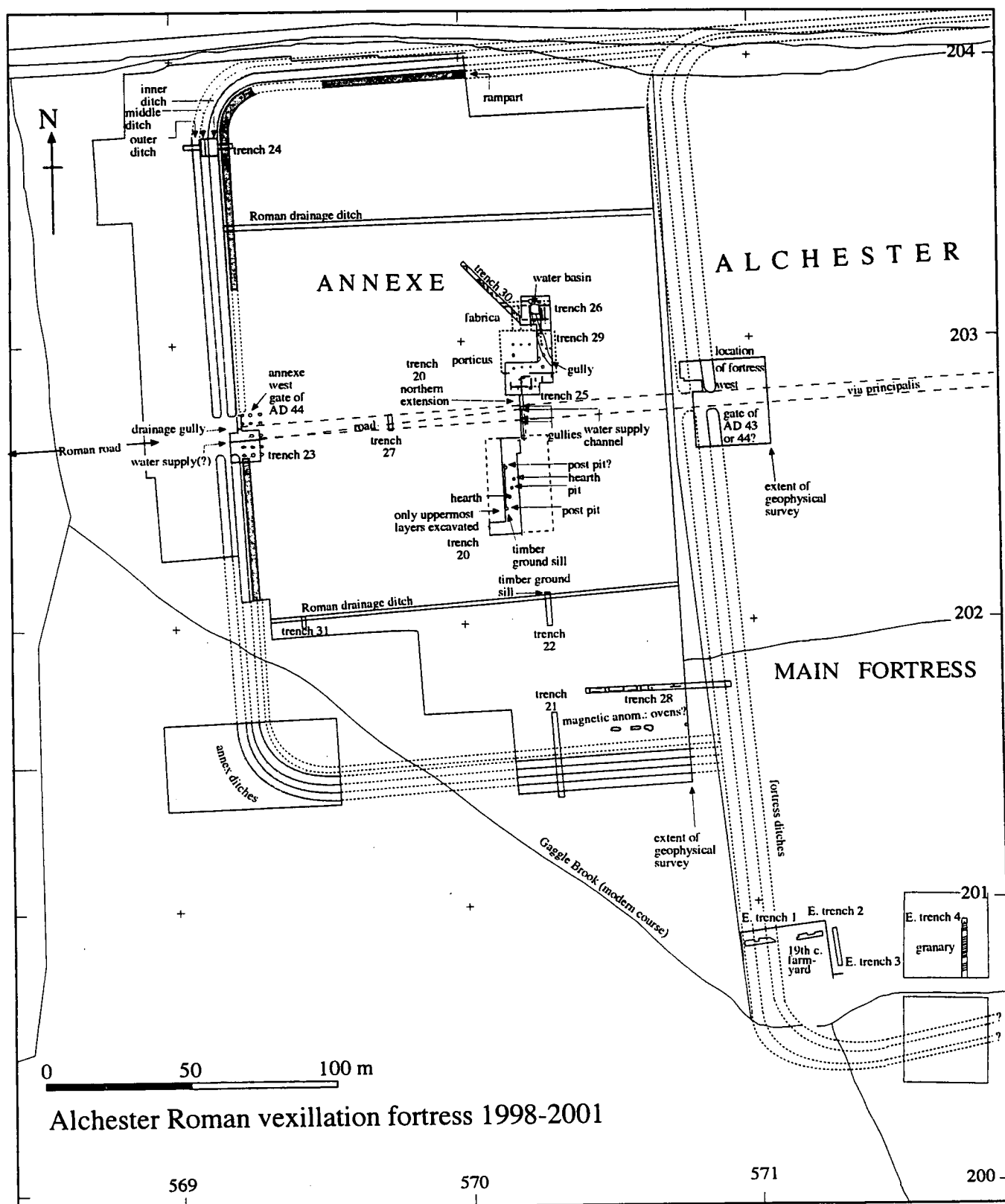


Fig. 24: The Alchester fortress and annexe (1998-2001)

assemblage of wooden artefacts, including thin tablets, double-pointed notched stakes ('tent pegs') and a wooden bowl (examined by Paola Pugsley who indicated [pers. comm. 2001] that it was one of only a small number [20-25?] wooden vessels in Roman Britain).

(3.) In order to be able to take samples for archaeobotanic analysis from the bottom of the inner fortress ditch likely to

shed light on the environment and diet of soldiers in the military phase.

The excavations have been successful on all three accounts.

(1.) Interestingly, we found that within trench 24 a deeper and a shallower V-shaped ditch join; the northern 3.1m are c 0.28m deeper than the southern 2.4m. This might simply

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indicate that two working parties met here. However, it seems more likely to me that the corner, always a weak point in any rectangular fortification, was more heavily defended. The presence of the middle fortress ditch in trench 24, observed in the previous season, could be interpreted in the same way considering that no such obstacle existed in the area of trench 21.

(2.) The further wooden artefacts recovered in 2001 included three additional thin wooden tablets recovered en bloc for excavation in the laboratory as well as various other worked pieces of wood. No traces of writing are visible on any of the tablets recovered in 2000 and 2001 with the naked eye nor did infrared photographs of the pieces so far conserved by Dr Graham Morgan reveal any such traces. Parallels from Roman Switzerland (Schoch 1979) may suggest an identification as thin wooden shingles, though if this interpretation should be correct (despite their fragility) the absence of nail holes or clear traces of weathering suggest that they were discarded without ever having been used. An interpretation as raw material to be cut into writing tablets (see Bowman/Thomas 1994, 90-8 no. 154; pl. V for a particularly large writing tablet made equally of oak) or lamellas of a shield similar to the Fayum shield (Kimmig 1940; Bishop/ Coulston 1993, 58-9) are alternative possibilities.

Interestingly some local cornbrash stone (identified by Philip Powell) was found sealed beneath wooden artifacts of the military period. This suggests that local stone formed part of the military period rampart, perhaps of its facing.

(3.) The examination of a wide range of soil samples from this trench and others by Dr Mark Robinson is ongoing and has already yielded interesting results, such as the earliest evidence in Britain for imported millet in a sample from the bottom fill of the outer fortress ditch (Mark Robinson, pers. comm. 2001).

### The Probable Fabrica: Trenches 25, 26, 29 And 30

The remains of Roman military buildings were better preserved in the area of these four adjoining trenches than observed anywhere else so far within the annexe. Despite clear plough marks which, considering the absence of post-fourth century material in the disturbed layer above, must be of late Roman or early post-Roman date, beam slots survived to a depth of up to 0.40m.

### Phase 1 (AD 44/45)

The earliest phase is represented by a gully of varying width (c 1.70m; depth c 0.97m below the modern surface, bottom at 62.45m above sea-level). The fact that this belongs indeed to the earliest phase is shown by the fact that various second-phase beam slots overlie it (Fig 25). Snails from the bottom fill provide evidence, according to a preliminary analysis by Dr Mark Robinson, that the gully indeed held water. It was deliberately filled in before the construction of the second phase building. This is shown by the fact that there are no traces of a timber cover between the upper and lower fill and no signs of soil collapse which one would have

expected had it been covered by timber and had it continued to function underneath the military building. The absence of finds from its fill equally points to an early date for its construction and abandonment. However, it could only function after the construction of the water supply gully. If, of course, the main fortress pre-dates the annexe, then the water supply ditch may already have been in existence by the time construction works in the annexe started in autumn AD 44. Even if not, it is hard to imagine that Phase 1 is later than AD 45.

The gully must have fed a shallow water-basin which was entirely destroyed at a later date and was within the area of the rectangular pit at its northern end. This rectangular pit showed no signs of any timber or clay lining, though the bottom fill (context 26.50) consisted of silty clay and was sampled in the hope that these samples might provide clues of its use prior to abandonment. It contained civilian-period objects, such as roof tiles, right down to its bottom fill (26.50). The original water-basin must have been smaller as the fourth-phase pit is cutting a second-phase beam slot in the north (Fig 25). There is no doubt that the water-basin was in the area of the rectangular pit as the gully is clearly orientated towards its central axis and as it does not continue in any direction beyond the pit.

In Oberstimm there was equally a water-basin supplied by a gully whose earliest phase also predates the construction of the fabrica. Schoenberger (1978, 35; cf. 1976) suggests plausibly that this basin served for mixing the clay for the construction of wattle and daub buildings. The Oberstimm basin, in contrast to the Alchester basin, was integrated into the fabrica and continued to be used after its completion. Nevertheless, the original basins may well have served the same purpose. If so, the Alchester basin lost its function once the clay for the timber-frame building had been mixed, while a new industrial purpose was assigned to its equivalent at Oberstimm.

Surprisingly, the bottom of the rectangular pit is c 0.05m higher than the bottom of the supply gully, and it did not reach below the present water table. Test pits into the gravel underneath the pit confirmed that this was the natural gravel and not the sterile fill of the original basin (of which no traces survived underneath the pit). The original water-basin thus cannot have been deeper than the later pit and it is hard to imagine that it could have been much more shallow. The bottom of the pit is at 62.50m above sea-level, ie 0.10m below the bottom of the water supply gully underneath the west-east road (surviving depth in the northern extension of trench 20: 0.44m; bottom 62.60m above sea-level, 0.79m below the modern surface).

The way the water-supply gully curves from south-southeast to north-northeast (Fig 25) make one wonder whether the water-basin was indeed fed via a water-lifting device and supply gully underneath the west-east road which channeled water from the western section of the Gagle Brook into the annexe or whether the water supply might have come from the south or east. Both, the Gagle Brook and a stream whose

# Alchester fabrica

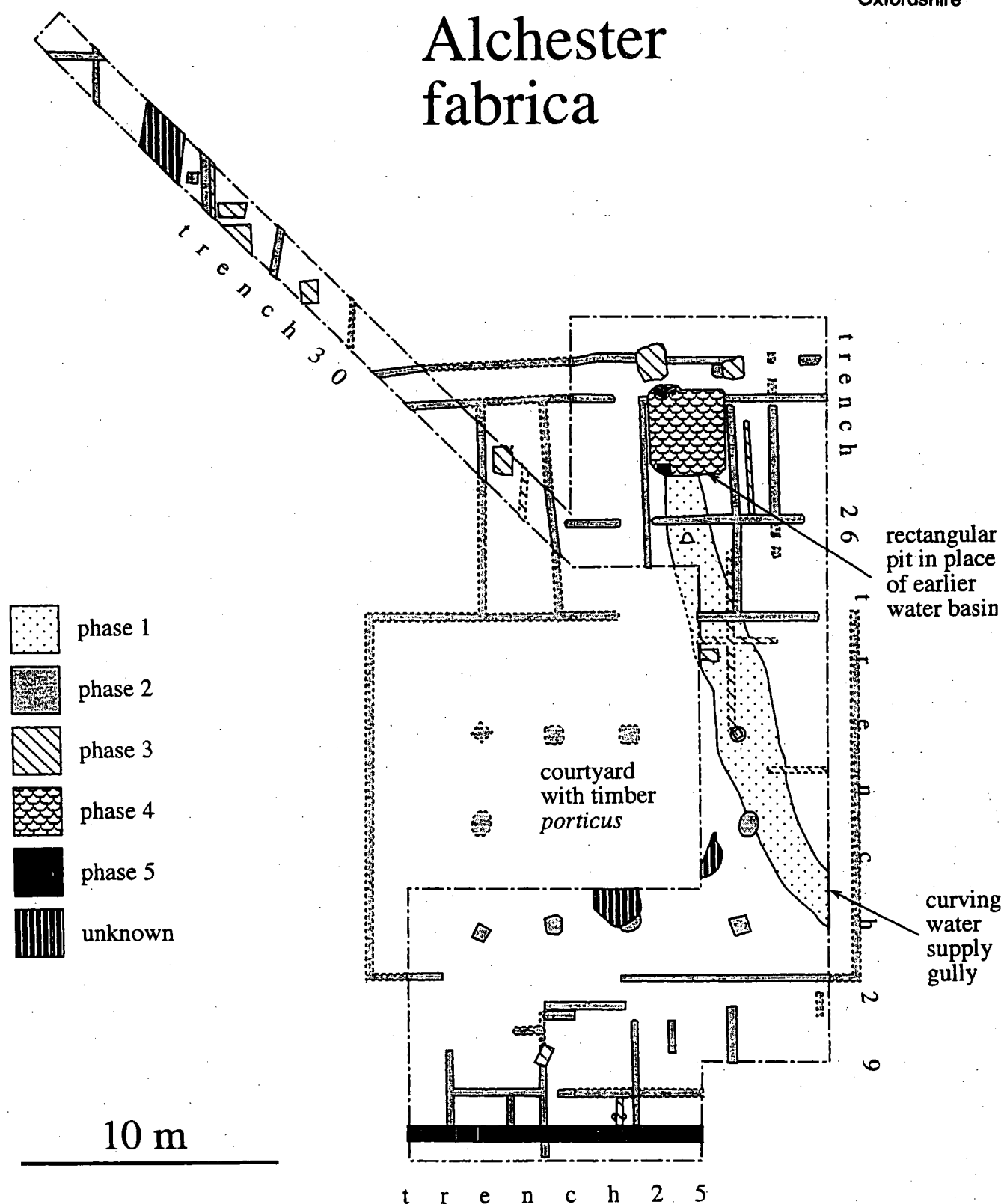


Fig. 25: The probable military workshops (fabrica) at Alchester.

modern course is some 250 to 500m east of the east side of the Roman town and earlier fortress, carried, at least in recent years, water throughout the year. If an undiscovered wooden aqueduct was used, the Gagle Brook would have been more suitable since it has a steeper gradient (the point where it crosses the 70m contour is just 1.8km from the centre of Alchester as opposed to 4.9km in case of the eastern stream (though only 2km in case of one of its

tributaries just south of modern Bicester if this provided sufficient water). While we do not yet know the precise location of the ancient stream bed of the Gagle Brook in the vicinity of Alchester at the beginning of the Roman era, it seems likely that it was close to its later and present artificial stream bed. If so, it was much closer than the eastern stream. Perhaps a water-lifting device was used to channel water from the Gagle Brook into the fortress, but not (as we had

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thought previously) from the west, but from the, presumably, even closer section of the stream in the south. This need not imply that the interpretation of the shallow gully underneath the west-east road in the annexe as a water-supply gully was wrong, but the direction of flow of the fairly level gully is open to debate; it might have supplied buildings in the west of the annexe with water coming from a channel leading out of the main fortress.

It seems in any case likely that the water-table in the curving gully was high enough to ensure that sufficient water reached the shallower basin. Despite the fact that it seems curious why the curving water-supply gully should have been, at least marginally, deeper than the basin, it is hard to imagine that we are dealing with a drain. If the gully was a drain leading away from the pit one would have to expect a separate water supply. However, there is no second gully leading towards the pit from any direction. Considering that the water-supply gully underneath the west-east road in the northern extension to trench 20 survives to a depth of 0.44m, it seems unlikely that there would have been a separate water supply system at such an elevated level that no traces of it survive today. Needless to say, such a massive drain would have made no sense for an impluvium (ie a decorative basin which received rainwater from the roof in a Mediterranean-style atrium).

When Phase 1 ended is a matter of interpretation. The sheer contrast between the sterile fill of the gully and the abundance of military finds elsewhere in Alchester, suggests that the installation was filled in soon, perhaps only a few weeks after it had been constructed. Even on the assumption that it had a timber cover which was removed prior to filling in, it still would be difficult to explain why the re-deposited material used to fill it was sterile as well, had it been filled in even after only a few years. Even though it is well known that the construction of some internal buildings in Roman forts or fortresses tended to take several years (some buildings in Inchtuthil were still missing after c three years of occupation: Pitts/St. Joseph 1985), I am tempted to think that Phase 1 in Alchester came to an end as early as AD 45 or even still in AD 44. If this assumption is correct, then the daub for later buildings (including the second-phase building [ie the probable *fabrica*] on top of the curving gully) must have been mixed elsewhere.

### Phase 2 (from c AD 45 onwards)

After the gully had been filled in, a large timber building was constructed, presumably still in the mid AD 40s. It will have extended to the main west-east road in the south, though its southern-most parts were destroyed by civilian-period roadside ditches (extending in the north to 0.20m north of the south side of trench 25). Its limits in the west, east and north have not yet been found. The main section explored consisted of several rooms grouped around a courtyard with a timber porticus. The precise dimensions of this courtyard are still a matter of conjecture, but there was a line of three post holes in a north-south direction and at least four in a west-east direction (see hypothetical reconstruction on Fig 25)

Whether there was a second courtyard in the area of the water-basin is unknown. This was no longer fed with flowing water as the water gully had been filled in, but the architecture of the surrounding rooms renders it conceivable that it could have been transformed into an impluvium fed by rain water. Alternatively it might already have been transformed into a pit (for storage purposes?). In either case it cannot yet have been as big as its civilian period successor, considering that the latter is cutting a beam slot of phase 2. We can in any case presume that a sunken feature continued to exist in the area, given its survival into the civilian period when it was enlarged. The western and eastern beam slots also appear to respect its position.

### Phase 3 (AD 50s/60s to late 1st/early 2nd century)

A neat separation between Phase 2, 3 and 4 features is, unfortunately, not always possible, and some features tentatively attributed to Phase 3, might belong to Phase 2 and others to Phase 4. The plan of the *fabrica* (Fig 25) is a first attempt at attributing features to phases, but may have to be modified in the light of the full finds analysis and the results of future seasons.

The post-holes cutting Phase 2 beam slots in trenches 25 and 26 post-date Phase 2 undoubtedly, but it is hard to establish by how much. There are too few of them to assume that we are dealing with entirely new buildings. The fact that they cut existing beam slots might suggest that we are dealing with repairs when the timber of the original building began to rot, but when it had not yet been entirely abandoned. They have been attributed to Phase 3 but it is not yet known whether they pre- or post-date the end of military occupation. Nevertheless, it is tempting to assume that the two post-holes north of the rectangular pit in trench 26 are contemporary with the post-holes in the northwest and southwest corners of the rectangular pit and carried a tiled roof of a restored porticus around the pit. Thus they might belong to Phase 4.

Whether the post-holes of similar size encountered in trench 30, the north-western extension, date to Phase 2, 3 or 4 is equally uncertain since none of them cuts or is cut by another feature. However, they make little constructional sense in Phase 2 and have therefore been attributed to Phase 3.

Equally in Phase 3 large parts of the interior were paved with burnt stones which, according to Dr Graham Morgan (pers. comm. 2001), may be by-products of lime burning. A charcoal-rich layer built up on top of this paving. Small hearths were encountered, in the south of trench 25 and in the south of trench 26 above the gully. It is hoped that the analysis of soil samples will clarify the function of these hearths and will show what kind of (industrial?) activity led to the accumulation of charcoal. According to Dr Chris Salter's examination on site there are no traces of metal-working anywhere within the trenches.

Some beam slots appear to have been replaced after some time by more shallow beam slots. Other beam slots attributed to Phase 3 are those which are so close to Phase

2 beam slots that it seems doubtful that they could have existed contemporaneously. While some Phase 3 features may date to the early civilian period, it seems likely that at least the beam slots pre-date the end of military occupation. If so, they attest structural repairs and alterations which suggest that military occupation continued at least well into the AD 50s, if not into the early to mid AD 60s. This conclusion is supported by the large number of military objects lost. The absence of late Neronian coins, brooches or samian ware, however, suggests that the military phase came to an end at latest by the mid AD 60s, if not before.

### **The function of the building**

The range of buildings in Roman forts and fortresses with courtyards is limited: the headquarters building, the hospital, an officer's house or a military workshop. The ground plan of the Alchester building rules out an interpretation as a headquarters building or a hospital. Thus it has to be either an officer's house or a military workshop (*fabrica*). The main arguments for either interpretation are as follows.

#### *Arguments for an interpretation as an officer's house*

- There are as yet no clear traces of major industrial activities in Phase 2.
- Trench 26 yielded four Republican denarii, the highest concentration of silver coins so far anywhere in the annexe.

#### *Arguments for an interpretation as a military workshop (fabrica)*

- The terrain was in Phase 1 used for industrial activities and there was often a continuity of function of a specific area within a military compound.
- The paving with burnt stone and the accumulation of charcoal in Phase 3 is more appropriate for a *fabrica* than for an officer's house.
- The silver coins are a weak counter-argument as they correspond to less than one week's pay of a legionary.
- The area explored is as yet quite small and the absence of industrial installations thus not a strong counter-argument.

The arguments for an interpretation as a *fabrica* seem more persuasive, but the examination of the soil samples should be awaited before a final decision is made. Interestingly, there was a far lower concentration of body armour fragments in this area in comparison with trench 20. It seems possible that there were barrack blocks in the area of trench 20, largely destroyed by late Roman or early post-Roman ploughing. The comparative scarcity of body armour in the area of trenches 25, 26, 29 and 30 may thus suggest that this part of the *fabrica* or officer's house was less frequently entered by persons wearing uncomfortable body armour and was not used for the storage or production of body armour. It is unclear how we should interpret an isolated catapult head in trench 29.

### **Phase 4 (late 1st/early 2nd century)**

The bottom fill (26.50) of the rectangular pit contained roof tiles, the second layer (26.49) burnt chaff of spelt wheat (Dr. Mark Robinson, pers. comm. 2001) and early second

century samian ware (Geoffrey Dannell, pers. comm. 2001). The enlarged pit is, of course, stratigraphically older than its fill, but it seems likely that the roof tiles fell from a roof resting on posts in the pit, supported by stone post packings. (The stones are depicted in black on Fig 25, but should not be confused with phase 5 structures.) Therefore it seems likely that the latest phase during which the sunken feature remained open dates to the later first or even early 2nd century. At least parts of the building thus appear to have been used well into the civilian period. Whether the building or whatever remained of it had by then passed into private hands or whether it continued to be used by state officials is impossible to establish.

### **Phase 5 (late 1st/3rd century)**

Phase 5 could be contemporary with Phase 4, but is more likely to be later. It is represented by a stone wall which cuts phase 3 paving. Geophysical survey suggests that it continued in the west to the southeast corner of the 'Castle Mound' bath-house. It probably marked a property boundary at a time when the military building (or at least the adjacent sections of it) no longer existed.

### **Water Supply and Drainage: Trenches 27 And 31**

In trench 27 we found the northern and southern drainage gully of the main west east road. The main aim of trench 27 had been to test whether we could find the water supply ditch found in 1999 in the northern extension to trench 20 and in 2000 in trench 23. There were indeed traces of a possible gully whose bottom at 62.56m above sea-level would be perfectly compatible with its interpretation as a part of the water supply ditch underneath the road (62.56m above sea-level in trench 23 and 62.55m above sea-level in the northern extension of trench 20). Unfortunately, however, the remains of this possible gully were so disturbed by a later feature, presumably a tree-root, that it is impossible to be certain about its interpretation. Trench 27 also yielded the only evidence for the presence of slingers, a clay slingshot, so far.

Trench 31 had been excavated across a long ditch (Fig 24) in order

(1.) to confirm whether the ditch dates to the military period as suggested on the basis of the excavation of another section in trench 22 in 1999.

(2.) to explore the drainage system of this low-lying fortress. Was it indeed a drainage or perhaps a water-supply ditch? and

(3.) to examine the potential for the survival of waterlogged remains.

The excavation answered all three questions.

(1.) As in trench 22 the bottom fill of the ditch contained no civilian period artefacts, but a rich assemblage of military-period objects. This observation in conjunction with the fact that a ditch in this wet environment must have silted up very quickly excludes the possibility of a civilian period ditch filled with re-deposited earlier finds. It must have been constructed during the military period.

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A second parallel ditch in the northern half of the fortress (Fig 24) surely dates to the same period considering that it is similarly placed (about half way between the central west-east road and the outer defences).

(2.) The bottom of the ditch in trench 31 was encountered at 61.77m above sea-level as opposed to 61.98m above sea-level in trench 22. Identification of this feature as a ditch draining westwards is thus correct.

(3.) The bottom 0.49m were found to be under water. A deposit 0.09m thick (31.10), 0.08-0.17m above the bottom of the ditch proved to be especially rich in organic remains including pieces of thin wooden plaques or tablets. In order to minimise any risk of damage to wooden artefacts a complete sample of this deposit was taken for excavation in the laboratory.

### Trench 28, the Western Defences of the Main Fortress and the Inner Occupation in the Southern Part of the Annexe

The main aim of the excavation of trench 28 had been to reveal the function of four linear anomalies shown by the geophysical survey of Patrick Erwin (Fig 26, nos. 1-4) as well as to test whether or not the present field boundary ditch (Fig 26, no. 5) follows an ancient ditch. I had assumed that some of these ditches could be associated with the postulated fortress underneath the town or the *via principalis* of the western compound of AD 44. The excavation revealed that the westernmost linear feature (no. 1.) was a measurement anomaly, a possibility Patrick Erwin and I had considered before excavation, but thought to be less likely. Nos. 2. and 3. proved to be Roman civilian drainage ditches, no. 2. 0.75m wide (bottom at 62.16m above sea level) and no. 3. 3.71m wide (bottom at 61.82m above sea level). The pottery analysis has to be awaited for a more precise dating.

No. 4. was the westernmost part of a ditch 14.44m wide, 32.80-47.24m east of the western trench end (bottom at 61.50m above sea level), undoubtedly the ditch associated with late 2nd century town wall; it stretched well beyond the modern field boundary ditch (no. 5). This is exceptionally wide; on the east side of the town, interestingly, the town wall ditch appears to have been only half as wide: c 7m (Young 1975, 140-1).

The berm between the outer edge of the probable town wall robber trench and the inner edge of the ditch was merely 0.6m as opposed to 5.00 to 5.8m in the east of the town. This suggests strongly that, unlike on the east side of the town, this wide ditch incorporates an earlier military ditch, thus doubling its width and substantially reducing the width of the berm. The probable bottom fill of this ditch (28.82) was found underneath the town wall ditch and appears to have been cut by this shallower later ditch. It contained Iron Age and mid first-century pottery (Nicholas Cooper, pers. comm. 2002). It should be stressed that conditions for observation were far from ideal since, for safety reasons, all except the bottom parts of the deep section had to be covered with trench sheets, thus only allowing examination of thin segments of the sections at any one time. Furthermore, the constantly infiltrating groundwater transformed the bottom

deposits into liquid mud. Nevertheless, I am fairly confident about the following observations. The probable bottom fill (28.82) of the ditch cut by the town wall ditch survived to a maximum depth of 0.30-0.35m (bottom at c 61.31m above sea-level); it was thus about 0.19m deeper than the latter. It appears to survive for a width of c 3m (41.70 to 44.70 east of western trench end. While some caution is advisable in the interpretation of the results, it appears likely that this is the surviving bottom of the outer fortress ditch, the upper parts of which were integrated into an exceptionally wide town wall ditch.

To summarise, the arguments for this theory are as follows:  
(1.) If it was rightly observed that town wall ditch is cutting the earlier and deeper ditch, the latter must predate the former.

(2.) If there was just a single-phase town wall ditch, it would be exceptionally wide: 14.44m as opposed to c 7m in the east. The amalgamation, however, of a town wall ditch and an earlier outer fortress ditch could easily result in such a wide ditch.

(3.) It is interesting to note that c 55m north of trench 28 there is a kink in the field boundary ditch; north of this kink it continues in a similar alignment, but c 4m further west. This might offer further support for the theory that, perhaps for drainage purposes, the southern section of the outer fortress ditch was kept open and formed in this area together with the new ditch an exceptionally wide town wall ditch.

Firm evidence for the western defences emerged from a geophysical survey of the area of the presumed west gate of the main fortress: a c 4m wide very distinctive negative anomaly is clearly visible (Fig 24) crossed by the main west-east road, presumably on a causeway. An area of very high resistance to the west must, as in trench 28, correspond to the stone tumble of the collapsed town wall. Many large stones are visible near the surface. It seems likely that, as appears to be the case in trench 28, the stone tumble overlies the outer fortress ditch. Any ditch under a thick layer of stone tumble is undetectable by geophysical survey. Only the upper parts of what must be the town wall robber trench have been exposed in the easternmost section of trench 28. As in E. trench 4 it is filled with gravel. The band of medium resistance, c 2-3m wide, between the linear long low-resistance feature (the presumable inner fortress ditch) and the area of high resistance (the probable stone tumble from the town wall) must be the town wall robber trench. It appears thus that, as in the east of the town, the western town wall was situated between two mid first century ditches. In opposition to Young (1975) who thought they were drainage ditches I would consider these ditches to represent the defences of the fortress underneath the town.

Trench 28 and the geophysical survey have thus led to the location of the western defences of the fortress underneath the town. In order to confirm this interpretation, it is planned to section also the inner fortress ditch and to excavate the southern half of the western gate of the main fortress in 2002/03.



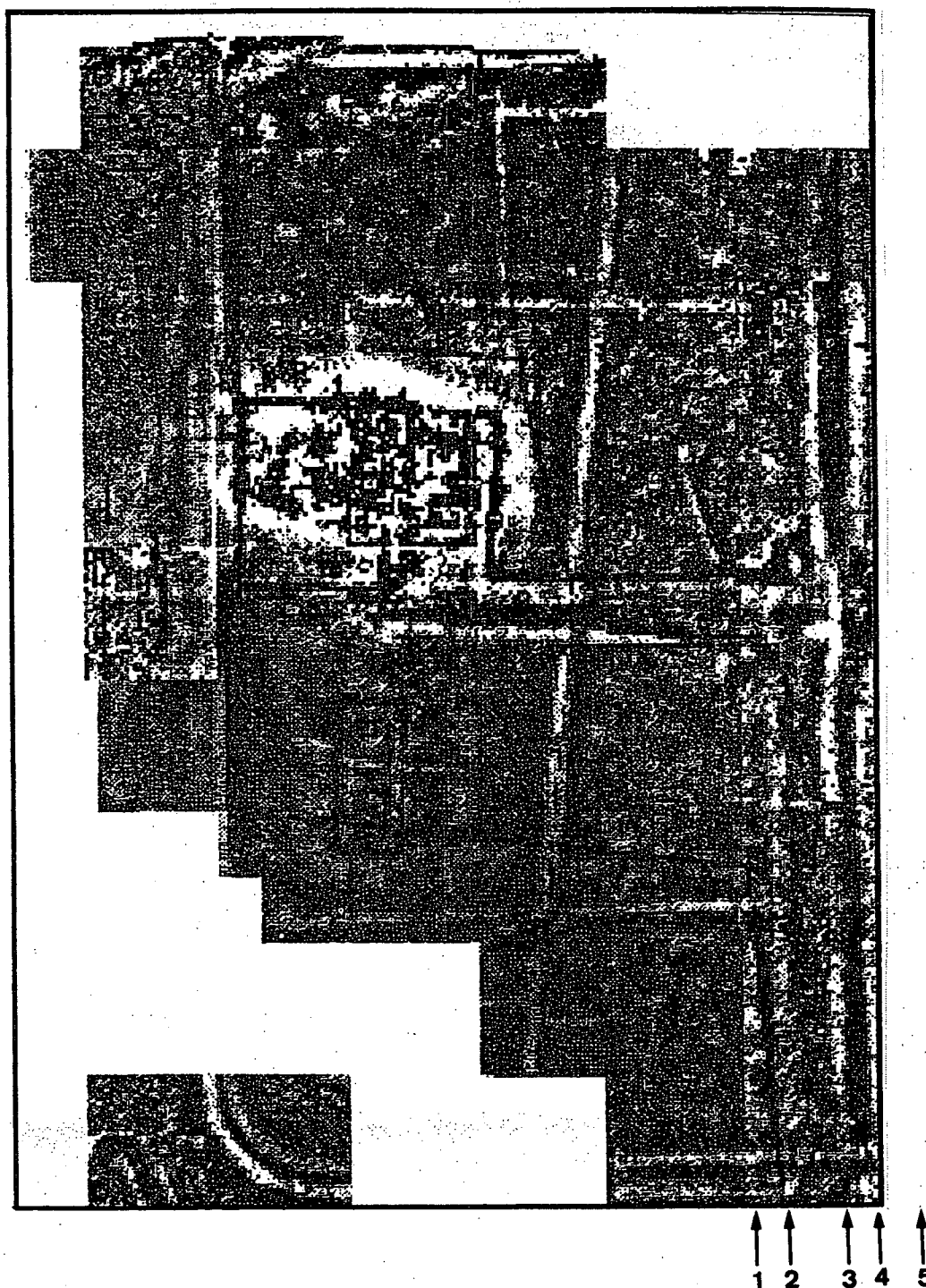


Fig. 26: Resistivity survey by Patrick Erwin with the linear anomalies investigated in trench 28. For the interpretation of the other features see Erwin and Sauer 2000.

#### Arguments for interpreting the western compound as an annexe

The results of the excavation of trench 28 have also major implications for the interpretation of the compound of AD 44. I consider it now to be an annexe to the (presumably earlier) fortress underneath the town.

The following indications point towards this interpretation: (1.) The southern ditches of the western compound intersect with the north-south linear low resistance features (Fig 26). Had any of the low resistance features proven to be ditches of the fortress underneath the town, then the intersection of

the ditches would have provided evidence that we are dealing with two compounds which did not exist at the same time. Now that we know that the north-south linear low-resistance features visible of the geophysical survey are of Roman civilian date, they do not exclude an interpretation of the western compound as an annexe to a fortress whose western defences are beyond the limits of the geophysical survey (cf. Fig 26).

(2.) If the western compound was the western part of a fortress, one would expect the via principalis of such a hypothetical fortress to run at a right angle to the west-east

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road. Considering that the length-width ratio of forts and fortresses does not normally exceed 3 : 2, one would expect this *via principalis* to be within the area covered by geophysical survey. One would equally expect this *via principalis* to be flanked by drainage gullies. As no drainage gully was observed during our excavation and as ditches 2. and 3. would not have destroyed more than one drainage gully considering their width, it seems clear that no *via principalis* existed (unless it was indeed in the area of the later town wall ditch or further east).

(3.) The fact that there is no sign of a causeway over the southern fortress ditches (Figs 24 and 26) provides a further argument against the existence of a north-south running *via principalis* within the western compound (even though a timber bridge, undetectable by geophysical survey, cannot be excluded).

(4.) The fact that the west-east road forms an axis of symmetry was taken to indicate that it was the *via praetoria* of the western compound. However, it is by no means inconceivable that it would have been convenient to build an annexe split symmetrically into two halves by a pre-existing road. Each half, for example, could have accommodated an equivalent number of soldiers whether of one unit of c 500 men each or whether consisting of detachments from different units. In the light of the 2001 season it is clear that both halves were densely occupied.

(5.) Large annexes, while otherwise scarce, are typical for the invasion period of Britain: the fortresses of both Colchester and Wroxeter have very large annexes (Wacher 1995, 118-19 figs. 48-9; White/ Barker 1998, 40 fig. 16).

### New evidence for the military occupation of the south half of the annexe

Trench 28 has also revealed a series of beam slots. In view of the narrowness of the trench it is a matter of speculation what type of military building they belonged to (the distance of the beam slots would be consistent with north-south running barrack blocks as one possible, yet by no means certain interpretation). It is in any case clear that there was dense military occupation in the area of trench 28 where not disturbed by later ditches.

Ancient plough damage reaches deeper than in the area of trenches 25, 26, 29 and 30. In conjunction with what had already been observed in 1999 and 2000 in the area of trenches 20, 21 and 22 it appears that, in general, the preservation of shallower features such as beam slots is worse in the southern half of the annexe than it is in its northern half. By contrast, as a result of the terrain, the water table tends to be closer to the surface in the southern half than it is in the north and thus the potential for the preservation of organic remains is particularly good in the south (while, however, particularly rich deposits were encountered in the north in trench 24).

Geophysical survey by Adrian Butler and Dr Patrick Erwin also revealed a series of four high magnetic anomalies close

behind the rampart (fig 1). In this position hearths and ovens, in particular bread ovens, are often found in Roman forts and fortresses (Drexel 1910; Jacobi 1930; Johnson 1983, 200-2; Hogg 1968). Such installations were placed away from the internal buildings next to the rampart in order to reduce the fire risk. If this hypothetical interpretation is correct (and it is as yet unconfirmed by excavations), then the mass production of bread as well as the high density of military buildings and pieces of equipment indicates that the annexe was densely occupied by troops and was not merely an annexe for storage purposes.

### E. Trench 4: The Granary in the Main Fortress and the Southern Defences

The most surprising result of the 2001 season came from this trench. Christopher Young (1975, 139 figs. 2-3) had found in 1974 mid 1st century ditches in the area of the later town walls on the east side of the later town. The remarkably rectangular ground plan of the area surrounded by town walls in the later second century suggested anyway the possibility of a military predecessor to the town. Therefore it had been our aim with this trench to establish whether or not the southern section of the town walls equally followed mid first century ditches. Instead we found what were the remains of a raised floor of a military granary (or even two successive buildings), cut by the later town wall and sealed beneath plough soil under its rampart.

Apart from the town wall rampart and other associated features no structures of the Roman civilian period survived. However, a piece of re-deposited marble may suggest that marble floors existed in the small town. The impression of reasonably high living standards is reinforced by the discovery of a discarded lead stopper for a water pipe from the town wall ditch fill in trench 28 (see Duchatel 1970, 310; 315 fig. 35; 318 fig. 36 for a close parallel) which suggest that not only the fortress, but also the civilian town had a flowing water supply.

The town wall itself had been robbed out to the bottom of its foundations; a thick layer of stone tumble on its south side suggests that this happened only some time after its partial collapse. The town wall robber trench was 2.53m wide and was adjoined by the town wall rampart in the north. Anglo-Saxon pottery (c AD 650-850, identified by Nicholas Cooper) suggests the existence of some sort of dwelling on top of the wall or rampart. While we cannot exclude that this was a temporary re-occupation of a small area, it is tempting to think that the town of Alchester might have continued to exist until at least the 7th century (considering how difficult it is to prove archaeologically continuity of settlement through the 5th and 6th centuries even for towns where there is written testimony for continuity).

Underneath the town wall we encountered 19 parallel foundation trenches (or beam slots?) over a distance of 16.40m. The town wall robber trench and a Roman civilian period ditch reached deeper than the level of these narrow trenches thus destroying their remains in these areas. Assuming an equal spacing (c 0.67m centre to centre), there

would originally have been 25 parallel foundation trenches.

There can be no doubt that these narrow foundation trenches must form part of a military building:

(1.) They are separated from the rampart of the town wall by a cultivation layer 0.22m thick and thus cannot form part of the foundation of the late second-century town wall rampart.

(2.) The stratigraphy [cf. (1.)] points towards an early date while the type of architecture rules out a prehistoric feature.

(3.) The width (c 0.25m on average) and regularity excludes an interpretation as plough marks or features associated with the cultivation of any domestic plant.

(4.) No civilian period parallels are known.

If the building is of military date there are merely two possible interpretations:

(1.) A timber granary or

(2.) a timber bath-house.

Since only one building, at Vindonissa, with a foundation consisting of parallel foundation trenches has been interpreted as a bath-house (Simonett 1934 and 1936; Hartmann 1986, 39 map 1.9; cf. Bosmann 1999 on a possible timber bath-house of different construction), the interpretation as a granary seems more likely than that as a bath-house.

If it was a granary, however, the narrow spacing of the foundation trenches is very unusual (Johnson 1983, 145-6; Manning 1975); the spacing of foundation trenches of timber granaries tends to be on average twice as wide as observed in Alchester. Whether we are dealing with two successive buildings or an unusual construction, perhaps designed to carry more weight (a more narrow spacing would still have allowed protection of the grain from humidity and rodents), cannot yet be said on the basis of our small trench. It is hoped that the 2002 season will answer these questions. We will also hopefully be able to establish whether traces of posts in the foundation trenches survive.

It appears that we may have found the northern limit of the building; a foundation trench 0.64m long at a right angle to the other foundation trenches might conceivably have functioned as part of the foundation of a loading platform. Neither the location of the west nor of the east side of the building are yet known. Whether the southern side has been destroyed by the later town wall ditch (which appears to have been lined with stones to form a bed for the Gagle Brook) or whether it extends beyond it is not yet known.

We have to assume that the granary would not have been allowed to encroach on the intervallum (the empty space between rampart and internal buildings) as this would have impeded troop movements in case of an enemy attack and as it would have brought the granary within easier reach of burning or glowing enemy missiles. This implies that in this area the southern fortress defences were well beyond the modern course of the Gagle Brook. A geophysical survey has revealed the traces of two possible ditches, the inner side of the inner one some 15m south of the south end of the

trench (Fig 24). Their alignment is similar to that of the foundation trenches. However, it ought to be stressed that the traces of these potential ditches on the geophysical survey are far less clear than the very distinctive linear anomaly in the area of the postulated west gate of the main fortress which must be the inner fortress ditch. Further survey and excavation is needed to test whether or not these slight negative anomalies might indeed be the southern defences of the fortress.

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## WESSEX ARCHAEOLOGY

Julie Gardiner

Ownership of the watercress beds at Ewelme (SU 463950 191820), near Wallingford, in south Oxfordshire has recently transferred to The Chiltern Society. The beds extend for c 700m on a north-west to south-east orientation through the centre of the village south of the High Street. They ceased commercial production in 1988.

In February 2001 the Society commissioned Wessex Archaeology to carry out an archaeological survey of the beds and adjoining land. The overall aim of the archaeological survey was to provide a large-scale plan and summary condition survey.

The survey programme comprised the three-dimensional recording of a c 600m stretch of the beds, from Manor Cottage in the south-east of the village, to the eastern face of the lower weir, west of the Benson Road bridge using a Total Station Theodolite. The survey area also included a small field of c 0.07ha, which flanks the southern banks of the beds, to the south-west of Manor Cottage.

A large-scale photographic survey of the east and west facing elevations of the Benson Road bridge was also made, to illustrate culverts at the base of the structure and a digital photographic record made to illustrate the detail and general context of the principal features of the watercress beds. The watercress beds comprise a series of partitions each defined by a wooden partition or dam. Where the stream is sufficiently wide, a concrete 'walkway' separates the beds into pairs, presumably to enable different water levels to be maintained in individual beds at different times, depending on the condition of the crop. A narrow channel runs along the southern side of the beds to facilitate the management of water levels to the beds.

Eight main features were recorded in the survey area. These comprise: the banks of the watercress beds, which comprise both earth and grass and a variety of other material types; a concrete walkway which runs up the centre of the watercress beds; wooden dams; wooden stakes; a canalised stream; buildings thought to be associated with the production of watercress; a road-bridge which crosses the beds; earthworks in adjoining land. A small World War II pillbox is also in the field to the south-west of Manor Cottage. The structure was not visible at the time of the survey, hidden by vegetation.